**Patent Claims:**

1.   Method for identifying a transient acoustic scene, said method including

   -   the extraction, during an extraction phase, of characteristic features from an acoustic signal captured by at least one microphone (2a, 2b), and
   -   the identification, during an identification phase, of the transient acoustic scene on the basis of the extracted characteristics,

whereby at least auditory-based characteristics are identified during the extraction phase.

2.   Method as in claim 1, whereby, for the identification of the characteristic features during the extraction phase, Auditory Scene Analysis (ASA) techniques are employed.

3.   Method as in claim 1 or 2, whereby, during the identification phase, Hidden Markov Model (HMM) techniques are employed for the identification of the transient acoustic scene.

4.   Method as in one of the claims 1 to 3, whereby one or several of the following auditory characteristics are identified during the extraction of said characteristic features: Volume, spectral pattern, harmonic structure, common build-up and decay processes, coherent amplitude modulations, coherent frequency modulations, coherent frequency transitions and binaural effects.

5.   Method as in one of the preceding claims, whereby any other suitable

characteristics are identified in addition to the auditory characteristics.

6.      Method as in one of the preceding claims, whereby, for the purpose of creating auditory objects, the auditory and any other characteristics are grouped along the principles of the gestalt theory.

7.      Method as in claim 6, whereby the extraction of characteristics and/or the grouping of the characteristics are/is performed either in context-free or in context-sensitive fashion in the sense of human auditory perception, taking into account additional information or hypotheses relative to the signal content and thus providing an adaptation to the respective acoustic scene.

8.      Method as in one of the preceding claims, whereby, during the identification phase, data are accessed which were acquired in an off-line training phase.

9.      Method as in one of the preceding claims, whereby the extraction phase and the identification phase take place in continuous fashion or at regular or irregular time intervals.

10.     Application of the method per one of the claims 1 to 9 for tuning a hearing device (1) to a transient acoustic scene.

11.     Application as in claim 10, whereby, on the basis of a detected transient acoustic scene, a program or a transmission function between at least one microphone (2a, 2b) and a receiver (6) in the hearing device (1) is selected.

12.     Application as in claim 9 or 10, whereby any other available function can be triggered in the hearing device (1) on the basis of the identified transient acoustic scene.

13.     Application of the method per one of the claims 1 to 9 for voice recognition.

14.     Hearing device (1) with a transmission unit (4) whose input end is connected to at least one microphone (2a, 2b) and whose output end is functionally connected to a receiver (6), characterized in that the input signal of the transmission unit (4) is simultaneously fed to a signal analyzer (7) for the extraction of at least auditory characteristics, that the signal analyzer (7) is functionally connected to a signal identifier unit (8) in which the transient acoustic scene is identified, and that the signal identifier unit (8) is functionally connected to the transmission unit (4) for the selection of a program or a transmission function.

15.     Hearing device (1) as in claim 14, characterized in that a user input unit (11) is provided which is functionally connected to the transmission unit (4).

16.     Hearing device (1) as in claim 14 or 15, characterized in that a control unit (9) is provided and that the signal identifier unit (8) is functionally connected to said control unit (9).

17.     Hearing device (1) as in claim 15 or 16, characterized in that the user input unit (11) is functionally connected to the control unit (9).

18.     Hearing device (1) as in one of the claims 14 to 17, characterized in that it is provided with suitable means serving to transfer parameters from a training unit (10) to the signal identifier unit (8).